

March 2008



MOSQUITO SURVEILLANCE PROTOCOL

Dear Mosquito Hunter:

Thank you for your participation in the Arizona arbovirus surveillance program. As you know, this program conducts surveillance for at least two mosquito-borne encephalitis viruses; St. Louis encephalitis (SLE) and West Nile virus (WNV). The goal of this surveillance program is to detect and monitor arbovirus activity throughout the state so as to identify areas of increased risk and to help guide risk reduction efforts.

You will need CO2 trap(s), a mechanical aspirator, screw cap glass, or plastic vials for adult mosquito collections, and shipping boxes. We will provide this equipment (as long as supplies last). If possible, please collect mosquitoes in your area at least once per month from April through October. We will identify mosquito species in all samples received. We will prioritize laboratory testing for the *Culex* species. However, species within other genera will be selectively tested as well. To collect mosquitoes, please follow the protocol below:

(1) Bait the trap with at least two pounds of dry ice to last all night, and hang the trap close to sun down. Hang CO 2 trap(s) with the bait can and/or motorized fan at shoulder height. Hang it from a tree limb or other structure in a place that is likely to have some shade from the east side so that the samples are not blasted by the morning sun. Also, hang it in a safe place to avoid theft or vandalism. You have the option of turning off the mini-light so as to be more discreet. The capture net hangs below the fan. If the night is likely to be breezy, it may be necessary to secure the net with a rubber band.

(2) Harvest your catch in the morning by pinching off the capture net while the fan is still running. Keep the mosquitoes cool and shaded until you are ready to process them into vials. When you are ready to process the mosquitoes, chill the mosquitoes briefly on dry ice (approximately 30 - 60 seconds) to immobilize them. Then aspirate them into the plastic capsule. If the mosquitoes are beginning to move

within the capsule, chill them again briefly to immobilize them. Then hold the capsule with the tube over the vial and tap the mosquitoes down the tube into the vial. Please DO NOT over-pack the vials, as this will damage the mosquitoes and makes identification difficult. Screw the cap on securely.

(3) Label the vial with the following information: Date, Location, and Collector's Name. White medical tape works well for labels. Seal the vial(s) inside a plastic bag so as to facilitate easier handling when removing the samples from the shipping box. Pack the vial(s) in a shipping box containing enough dry ice to keep the sample cold all the way to the ADHS Vector Lab. It is important to remember that preserving mosquitoes in a cold state makes species identification easier and more accurate. If samples become warm or soggy while in transit to the ADHS vector lab, the mosquitoes will deteriorate often to the point where species identification is not possible.

(4) Ship the sample on dry ice to:
Arizona Department of Health Services
Vector-Borne Diseases Program, Suite 140
Attn: Michael Fink
150 N 18th Ave. Ste. 140
Phoenix, Arizona 85007-3237

PLEASE DO NOT SEND THEM TO THE STATE LAB

It's Important to Remember:

- A. Pack the sample in enough dry ice to last two days.
- B. Collect and ship the mosquitoes early in the week. Do not ship mosquitoes on a Thursday or Friday, as they may not arrive before the weekend.
- C. Ship them by overnight delivery.
- D. Please notify us by phone (602) 364-4562 to let us know when samples are coming our way.

Thanks again for your help and good hunting!!!! If you have any questions, feel free to call VBZD staff at (602) 364-4562.